



Perma Tech, Inc.

"For ALL Your Loading Dock Needs"

Perma 150 HS Owner's Manual



High Speed Roll Up Door



DO NOT INSTALL, OPERATE OR PERFORM MAINTENANCE OF THIS PRODUCT UNTIL YOU HAVE READ AND UNDERSTAND THE SAFETY PRACTICES AS WELL AS THE INSTRUCTIONS CONTAINED IN THIS MANUAL.

ALL FASTENERS, BOLTS AND ELECTRICAL CONNECTIONS MUST BE CHECKED FOR PROPER ALIGNMENT AND TIGHTNESS PRIOR TO RUNNING THE PRODUCT.



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Warranty Statement:

Perma 150 HS

ONE YEAR WARRANTY ON MECHANICAL AND ELECTRICAL COMPONENTS.

Perma Tech Inc. warrants the original purchaser the complete door and its components that were ordered on the original order free of defects in material and workmanship for a period of twelve (12) months from date of shipment.

In order to qualify, defects must be immediately brought to the attention of **Perma Tech Inc.** during this twelve (12) month period. Only a qualified **Perma Tech Inc.** representative will be allowed authorization to replace defective parts during this period.

Any adjustments made to control panel and mechanical operation of this product without the written authorization of **Perma Tech Inc.** will void this warranty. This warranty is exclusively limited to defects to the door. Defects caused by misuse, collision, or other abuse of the product shall void this warranty.

The replacement of product and its components shall be the limit of **Perma Tech Inc.** responsibility. **Perma Tech Inc.** shall not be responsible for any other losses or damages due to the operation of this product.

No other written or oral representations made by **Perma Tech Inc.** representative are a part of this warranty unless specifically set forth in writing by an authorized **Perma Tech Inc.** official.

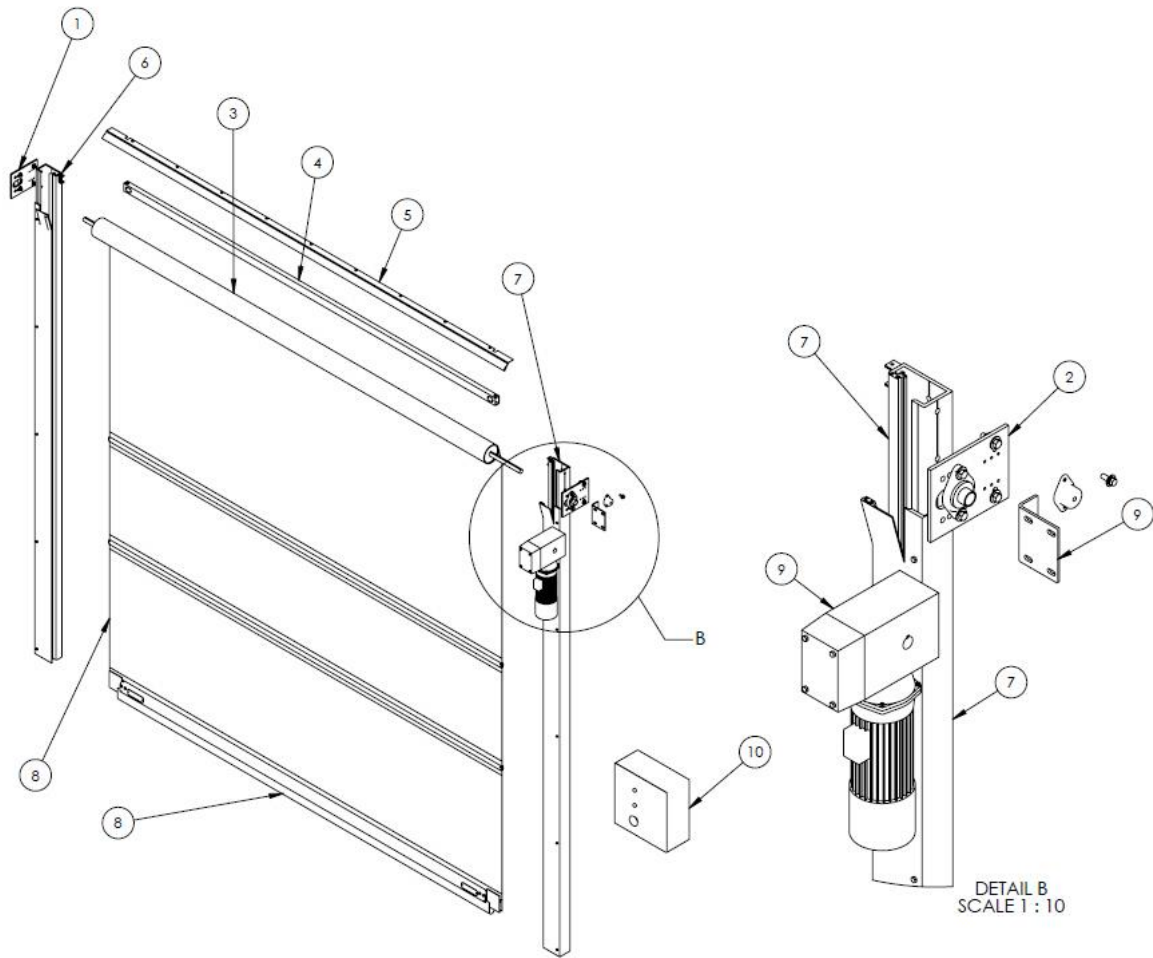
Safety:

Listed below are Recommended Safety Practices. Failure to do so may result in Property Damage, Personal Injury or Death.

1. During installation of the product remember to use proper “government approved” Person Protection Equipment (PPE) where required. PPE includes and is not limited to: hard hat, safety boots, safety glasses, hearing protection, gloves and a safety harness.
2. During installation, only certified personnel may operate lifting equipment. Equipment includes and is not limited to: Fork Lift, Man Lift, Genie Lift and Zoom Boom.
3. Do not install or operate this product while under the influence of drugs or alcohol.
4. Refrain from using the product if any part appears to be broken or damaged.
5. Keep a safe distance from product while it is running.
6. Do not go through door opening until door is completely open.
7. OSHA requires a disconnect to be locked out and tagged properly during all maintenance and servicing of this equipment.
8. All Electrical work including trouble-shooting, be performed by a qualified Electrician.
9. All Mechanical work including trouble-shooting, must be performed by a qualified trained Technician.

If you have any questions, please contact your local **Perma Tech Inc.** service provider for assistance.

Parts List:



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	010-0033	BEARING PLATE ASSEMBLY - LH	1
2	010-0034	BEARING PLATE ASSEMBLY - RH	1
3	010-0035	ROLL TUBE ASSEMBLY	1
4	020-0024	SPREADER BAR ASSEMBLY	1
5	020-0025	TOP BRUSH SEAL ASSEMBLY	1
6	020-0026	SIDE FRAME ASSEMBLY - LHS	1
7	020-0027	SIDE FRAME ASSEMBLY - RHS	1
8	030-0028	DOOR BLADE ASSEMBLY	1
9	040-0018	DRIVE UNIT ASSEMBLY BRADLEY 150	1
10	050-0055	CONTROL PANEL	1

Packing List:

Before beginning installation, open crate and inspect product to ensure all necessary parts are present. Inspect product for damage and report any findings **IMMEDIATELY**. Only written findings accompanied with photos will be considered as “damaged material” and eligible for warranty replacement.

Perma 150 HS includes:

- 1x Top roll assembly (includes door blade, wind ribs and bottom bar)
- 1x Drive unit assembly (including torque arm)
- 1x Left hand side frame with side cover
- 1x Right hand side frame with side cover
- 2x Bearing plate assembly with bearings
- 1x Spreader bar with seal
- 1x Control panel
- 1x Set of thru-beam self-cancelling light curtains (mounted in side frames)

Hardware:

- 10x 1/4"-20 x 1/2" long bolts for side covers
- 4x 1/2"-13 x 1-3/4" long bolts with washers and lock nuts for top roll brackets
- 4x 7/16"-14 x 1-3/4" long bolts with washers and lock nuts for top roll bearings
- 1x 1/4" key stock for drive unit

Tools & Equipment Required:

- Laser level, water level or line level
- Carpenter’s level (4-ft minimum length) and carpenter’s square
- Assorted hand tools (Socket set, wrench set, tape measure, hammer, pliers etc.)
- Crowbar or pry bar
- Forklift or proper rated Genie lift
- Two ladders taller than the door opening or scissor lift
- Four bar clamps (longer than the jamb width)

- Hammer drill and regular drill
- Masonry and steel drill bits (length depends on anchors or if threaded rod is used to through bolt the jamb)
- Anchors must be 1/2" diameter (sleeve anchors are used for block and brick walls – wedge anchors are used on poured concrete walls)
- Threaded rod 3/8" diameter with washers, lock washers and nuts (Stainless Steel is recommended)
- Crush plates for through bolted applications
- Assorted shim stock
- Silicone (to seal the door frames to the wall to stop air infiltration)

Site Review:

Before starting any work make sure the clients' door opening matches the shop drawing provided with the door dimensions. This will save time and frustration with your client if the dimensions do not match up.

Figure 2 shows a standard installation and location of major components of the Perma 150 HS. This figure is intended as a reference to assist with overall location of components only.

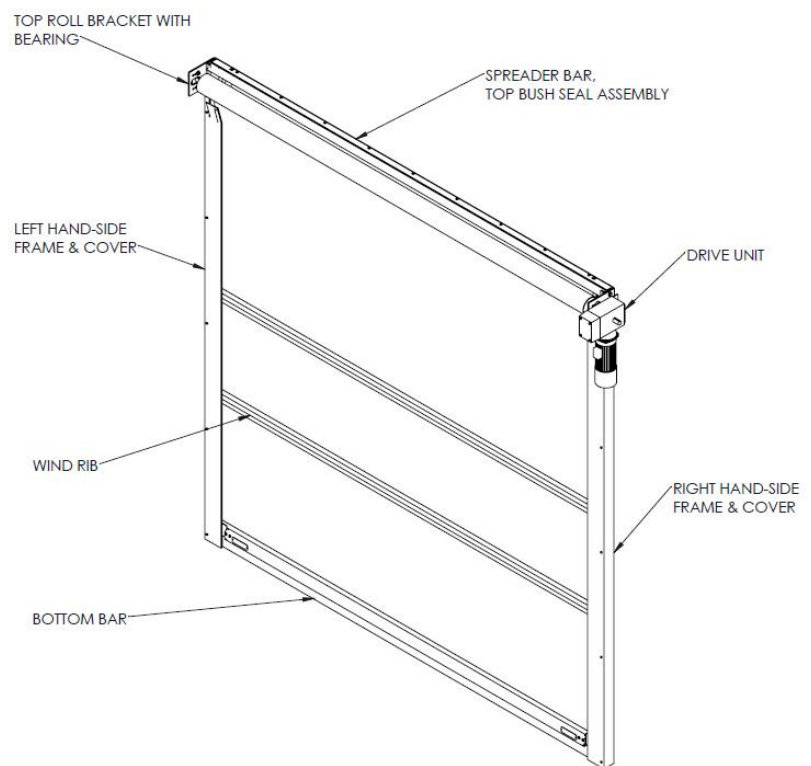


Figure 1

Handling:



Before lifting the header assembly out of the crate make sure there are no nails or sharp objects that may cut, tear or mark the fabric. Use slings and lifting equipment to make it easier to lift the top roll out of the crate, and position it on a properly rated genie lift, fork lift.


Steps:

1. Open crate, inspect parts listed above and report any missing or damaged items **IMMEDIATELY**.
2. Place two soft weight approved slings around the top roll assembly and lift top roll assembly from the crate with an approved fork lift of equivalent lifting device (REF. Figure 1).
3. Lay the top roll assembly near door side of opening on cradle or padding.
4. Repeat this procedure with the side frames & covers. Refer to “Parts List” (Page 4) to determine Left hand side frame, and Right hand side frame.
5. Remove spreader bar and control panel by hand and place in a safe area near installation site.

Anchoring Methods:

Correct anchoring of the side frame assembly to the wall is important for the smooth and safe operation of the door. The wall material should be strong enough to support the weight of the door and wall anchors. Through bolting is recommended, where possible, for a more secure installation.

Wall Type	Anchor Recommendation
Block, Brick Wall	MIN 1/2" Dia. Sleeve Anchor Bolt
Poured Concrete Wall	MIN 1/2" Dia. Wedge Anchor Bolt
*If expansion anchors are used, a regular Monthly inspection should be performed to ensure safe and secure operation of the door.	

Through Bolting	MIN 3/8" Dia. Rod
 <p>*Crush Plates, Washer, Lock Washer and Nuts must be used. *Extra support maybe required on thin insulated panel walls and drywall applications.</p> <p>NOTE: THREADED ROD MUST BE LONGER THAN THE THICKNESS OF THE WALL.</p>	

You must anchor side frames to the wall at the five points indicated on the drawing (Figure 2). Predrilled holes are already provided.

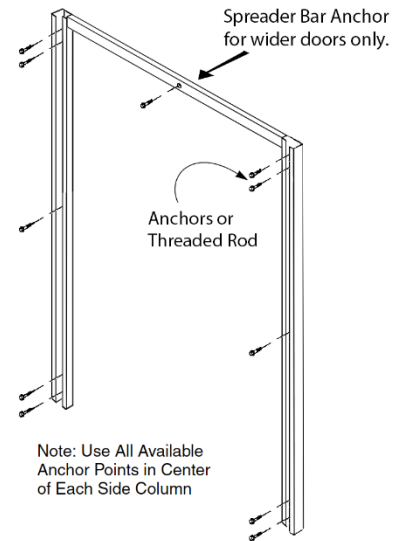


Figure 2

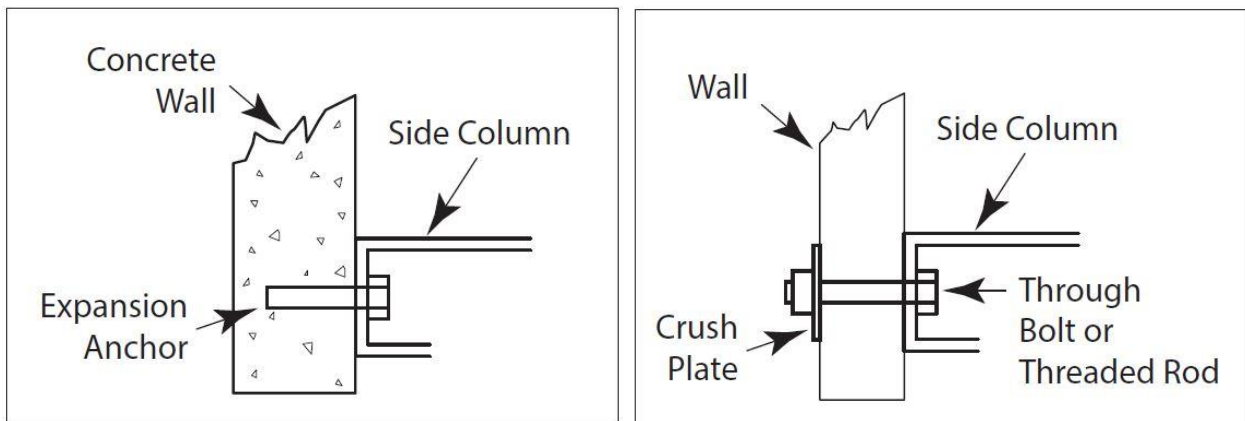


Figure 3: Concrete, Block, Brick or Insulated Panel Wall

Installations Steps:

1. Measure the width of the door opening (Figure 4).
2. Divide the measurement in half to locate the center line (mark the centerline on the floor).
3. Using the supplied shop drawing find out the width of the door and divide it in half. This will give you the distance from the center line to locate the left hand and right hand side frame (make a mark on the floor).
4. Check the distance between the two side frame lines and cross reference the measurement with your shop drawing to make sure it is the same as the manufactured width of the door.
5. Check the floor level across the door opening using either a laser level, water level or line level.
6. If one side is high than the other, a shim under the lower side frame will be required.

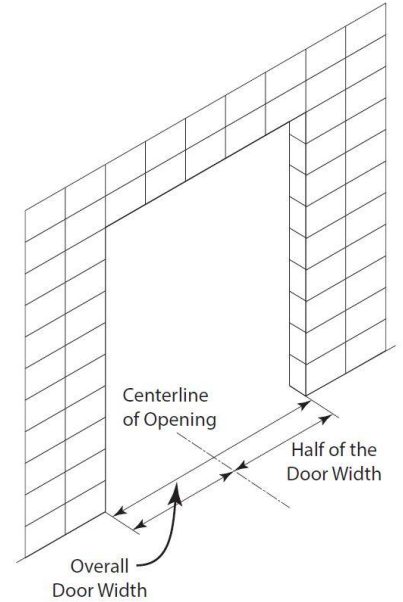


Figure 4

NOTE: FIGURE 5, 6, 7 WILL SHOW THE DIFFERENT METHODS THAT CAN BE USED TO MEASURE IF YOUR DOOR OPENING IS LEVEL.

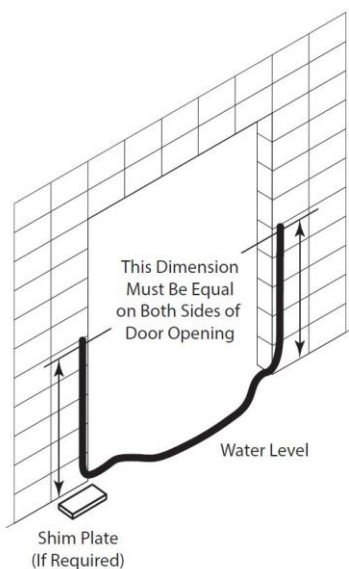


Figure 5

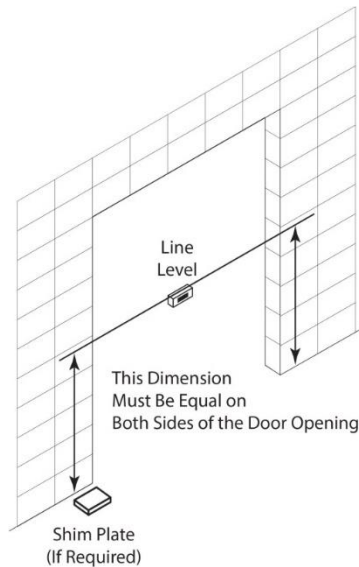


Figure 6

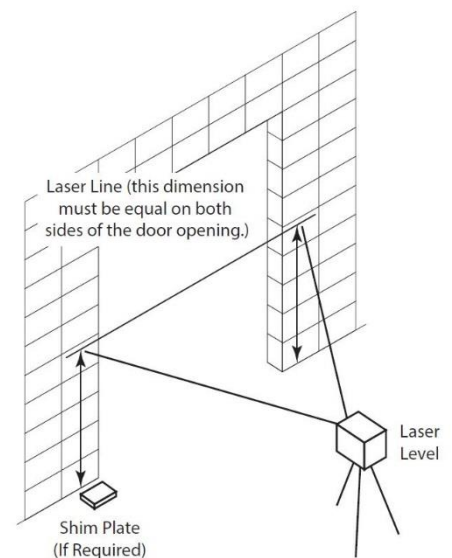


Figure 7

7. Lay the side frames on the floor with the wall mounting side facing down (Figure 8).
8. Ensure the right and left hand side frames are on the correct side of the opening, they will be marked from the factory with a sticker (Figure 8).
9. Place the spreader bar on the floor across the top between the two side frames (Figure 8).

NOTE: THE LIGHT CURTAIN SENDER AND RECEIVER WILL ALREADY BE MOUNTED IN THE SIDE FRAMES. THE NON-DRIVE SIDE WIRE MUST BE RUN THROUGH THE SPREADER BAR TO THE DRIVE SIDE, SIDE FRAME.

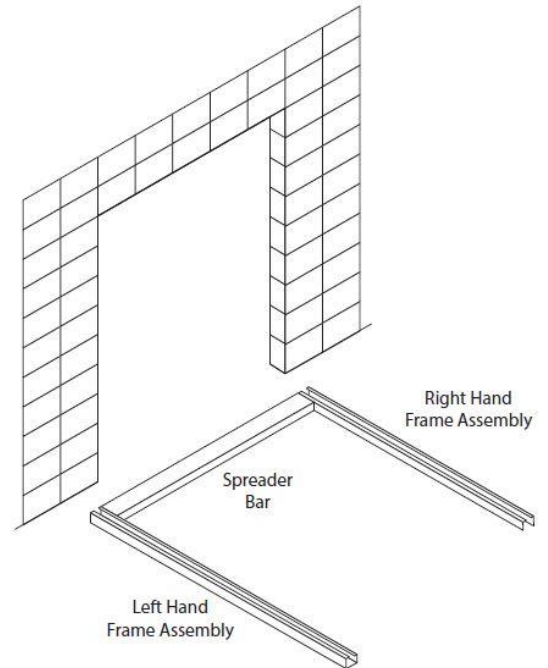


Figure 8

10. Before fastening the spreader bar, run the light curtain wire from the non-drive side to the drive side, and down the side frame. Run the wire through the provided holes with strain reliefs on both side frames and through the center of the spreader bar (Figure 9).

NOTE: SECURE THE WIRES TO THE WIRE TABS MOUNTED ON THE BOTH SIDE FRAMES SO THEY WON'T HANG AND GET DAMAGED BY THE DOOR BLADE.

11. Next fasten the spreader bar to both side frames using the brackets and fasteners provided (Figure 9).

NOTE: MAKE SURE THE LIGHT CURTAIN WIRE IS NOT GETTING PINCHED WHILE ATTACHING THE SPREADER BAR.

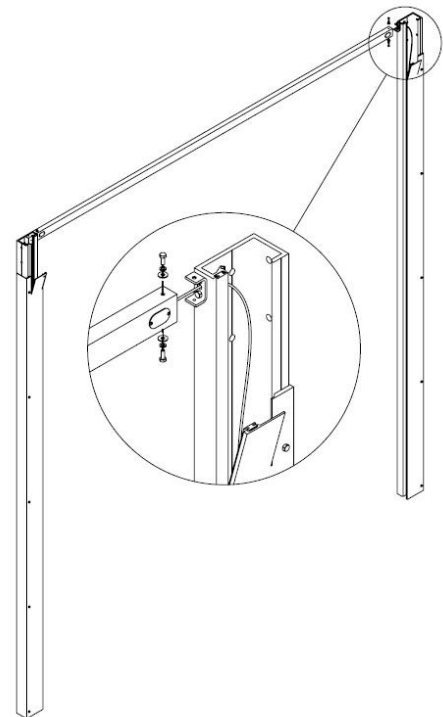


Figure 9

12. Lift both side frames and spreader bar at the same time. Stand the side frames on the floor tight against the wall. Align the inside edge of each side frame with the production width line laid out earlier on the floor (Figure 10).
13. Using a carpenter's level (Min. 4' long is recommended) make sure both side columns are level.

NOTE: IT IS CRITICAL THAT BOTH SIDE FRAMES ARE MOUNTED LEVEL AND SQUARE (BOTH VERTICALLY AND HORIZONTALLY) TO THE WALL AND FLOOR (SHIMS MAY BE REQUIRED).

14. Once the side frames are properly positioned, hold them in place with four bar clamps. Use one clamp at the top and one clamp at the bottom on both side frames. This will hold them securely in place while you are drilling and fastening them to the wall (Figure 10).

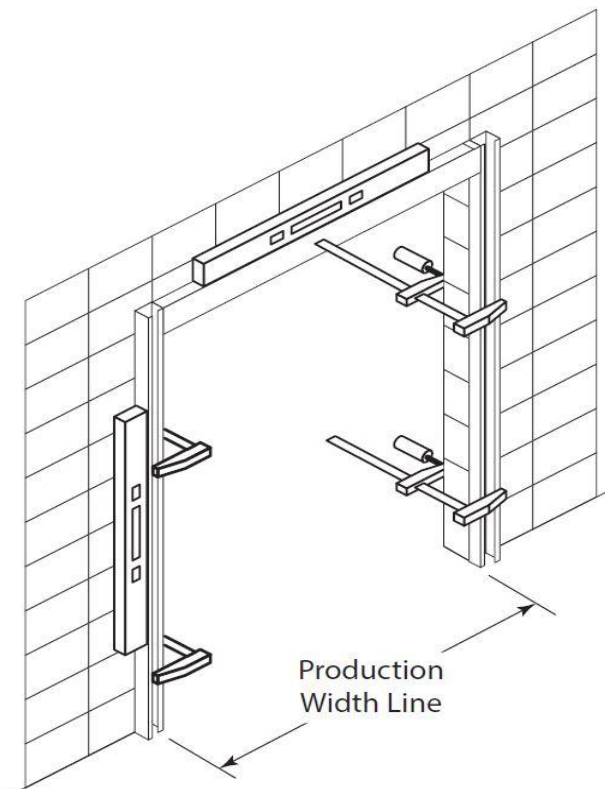


Figure 10

NOTE: ANCHORING METHODS FOR THE SIDE FRAMES ARE DESCRIBED ON PAGE 7 & 8.

15. Before mounting the top roll assembly, fully silicone the side frames and spreader to stop any air flow between the door frame and the wall.
16. The drive unit and limits will already be attached to the top roll assembly. Lift the top roll assembly out of the crate and position it on the forks of a properly rated genie lift or fork lift. The fabric must roll off the back of the roll facing the wall with the drive unit on the proper side (refer to shop drawing for drive side) (Figure 11).



NOTE: A CRADLE MOUNTED TO THE FORKS OF YOUR LIFTING EQUIPMENT IS RECOMMENDED TO SAFELY HOLD THE TOP ROLL ASSEMBLY IN PLACE WHILE RAISING IT INTO POSITION.

17. Before lifting the top roll assembly into position mount the non-drive side bearing plate assembly on the top roll non-drive side shaft (Figure 12).

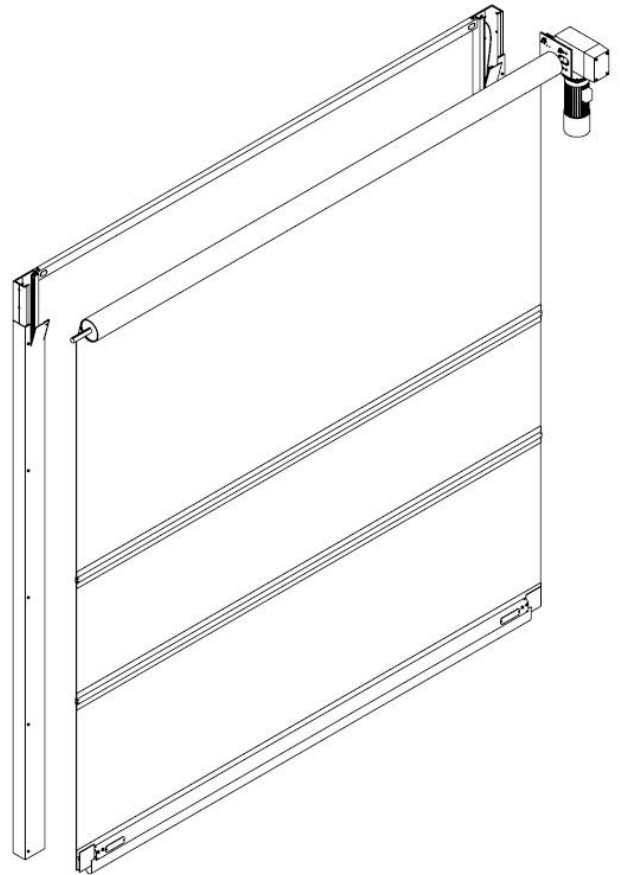


Figure 11

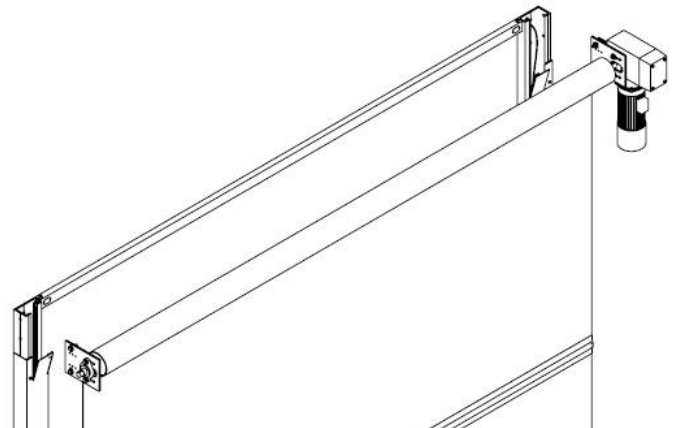


Figure 12

18. Lift the top roll assembly into position. Fasten the drive side bearing plate assembly first to the side frame. Then mount the non-drive side bearing plate assembly, second onto the side frame (Figure 13).

NOTE: ELONGATED HOLES ARE PROVIDED ON TOP ROLL BEARING PLATES TO HELP LEVEL THE TOP ROLL IF THE SIDE COLUMNS ARE NOT MOUNTED PROPERLY. IF THE SIDE FRAMES ARE LEVEL THEN REST THE TOP ROLL BRACKET WITH BEARINGS ALL THE WAY DOWN ON THE ELONGATED HOLES.

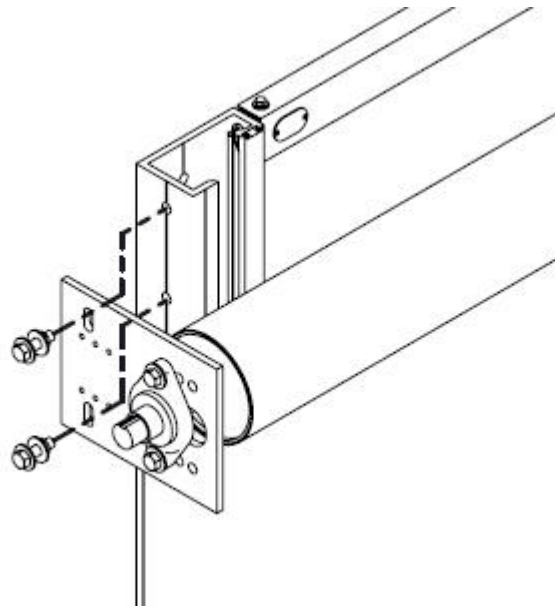


Figure 13

19. Once you have the top roll level you may secure the top roll brackets.
20. You will need to ensure the door blade is centered between the top roll brackets. Once this is centered then lock the non-drive side bearing plate set screws then check the drive side bearing set screws to make sure they are set.
21. Mount both side overs onto respective side frames.
22. The limit box and motor are prewired in Flexible conduit, these wires are numbered from factory.
23. A licensed electrician will now need to wire up the motor, limits, photo eyes and any actuators as per the shop drawing supplied.

Start up:

- I. Using the jog switch provided in control panel check to ensure the door is travelling in the correct direction. If it is, proceed to the next step, if not change the phasing and try again.
- II. Set Limits (Figure 14):
 - ^ Green cam is the top limit
 - ^ Black cam is the bottom limit
 - ^ Red cam is the top slow down limit (which should be set 6 – 12” from top limit)
 - ^ Yellow cam is the bottom slow down limit (which should be set 6 –8” from bottom limit)
 - ^ There is a brass limit adjustment rod supplied inside the limit box for ease of adjustment. Remove this adjustment rod from parking spot and screw into the desired cam to adjust.
 - ^ Once your limits are set tighten the brass locking nut with a 9/16” wrench. Be careful not to over tighten the spring washers. Place the adjustment rod back in parking spot for future use.

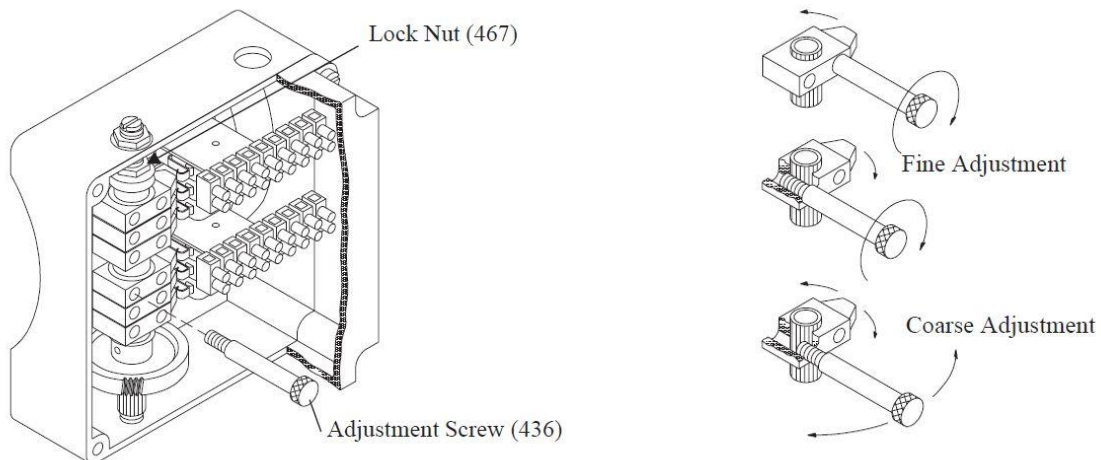


Figure 14

- III. Once the limits are set you may run the door.
- IV. Test the safety light curtain at this time.
- V. Test all actuation and safety systems at this time.
- VI. To adjust the open timer you will open the cover on the PLC. The upper blue and yellow pot adjusts the timer from 1 to 25 seconds. Be careful not to strip this pot (failure results in voiding the warranty on this PLC).
(Figure 15)

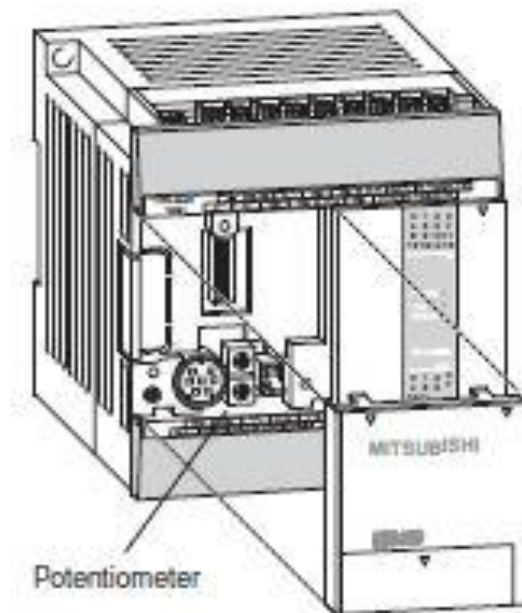


Figure 15

Final Inspection:

	Yes	No
Inspect & tighten all fasteners as required	<input type="radio"/>	<input type="radio"/>
Caulked & sealed	<input type="radio"/>	<input type="radio"/>
Area is cleaned up	<input type="radio"/>	<input type="radio"/>
Wired as per manual	<input type="radio"/>	<input type="radio"/>
Wires cut to length	<input type="radio"/>	<input type="radio"/>
Shields grounded	<input type="radio"/>	<input type="radio"/>
Door operates properly	<input type="radio"/>	<input type="radio"/>
Doors stops where set	<input type="radio"/>	<input type="radio"/>
Close timer set to desired client time	<input type="radio"/>	<input type="radio"/>
Safety eyes working	<input type="radio"/>	<input type="radio"/>
Actuators working as per clients' expectations	<input type="radio"/>	<input type="radio"/>
Manual left with client	<input type="radio"/>	<input type="radio"/>
Client trained on operation of the door	<input type="radio"/>	<input type="radio"/>
Front of door photo	<input type="radio"/>	<input type="radio"/>
Rear of door photo	<input type="radio"/>	<input type="radio"/>
Open control panel photo	<input type="radio"/>	<input type="radio"/>

Comments _____

Date:

Name of Installer:

Name of Client:

Signature of Installer:

Signature of Client:

Maintenance:

Date:

Checklist

		OK	REP	N.A.
General:				
• Structure door is attached to	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Fastener connections of all components	(tight)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Electrical lines and connections	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Top Roll Assembly:				
• Bearing s	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Shafts	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Spreader bar & seal	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drive Unit Assembly:				
• Gearbox	(condition & leaks)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Motor	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Limit Assembly	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Torque Arm	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Disengagement Mechanism	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Crank Handle	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Door Blade:				
• Alignment	(level & true)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Fabric Panels	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Wind Ribs	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Bottom Bar	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Vision Section	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Side Frame Assembly:				
• Glide Strips	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Side Covers	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safety Systems:				
• Light Curtain	(functional)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Front Photo Eye	(functional)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Rear Photo Eye	(functional)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Bottom Bar Safety Edge	(functional)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Bottom Bar Impact Switch	(functional)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Presence Sensor	(functional)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Labelling & Safety signs	(condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Actuation:				
• Pull Cords	(functional)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Push Buttons	(functional)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Motion Detectors	(functional)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Floor Loops	(functional)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Radio Controls	(functional)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
• Other	(functional)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:
